

## REMARKS/ARGUMENTS

### *Status of Claims*

Claims 1, 9, 24, and 30 have been amended.

Claims 1-36 are currently pending in this application.

Applicants hereby request further examination and reconsideration of the presently claimed application.

### *Claims Rejection – 35 U.S.C. § 102 and 35 U.S.C. § 103*

Claims 1-36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by or in the alternative under 35 U.S.C. § 103(a) as being obvious over Gabriel, U.S. Patent Publication No. 2003/0134433 (hereinafter *Gabriel*). Claims 1-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gabriel* in view of Bradley, U.S. Patent Publication No. 2004/0043527 (hereinafter *Bradley*), Clawson, WO 00/51186 (hereinafter *Clawson*), and Lieber, U.S. Patent No. 7,129,554 (hereinafter *Lieber*). According to MPEP § 2131, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Likewise, as noted by the United States Supreme Court in *Graham v. John Deere Co. of Kansas City*, an obviousness determination begins with a finding that “the prior art as a whole in one form or another contains all” the elements of the claimed invention. See *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 22 (U.S. 1966). Applicants submit that the cited references either singly or in combination do not disclose each and every element set forth in the pending claims. Consequently, the pending claims are neither anticipated by nor are obvious in view of the cited references.

Applicants have amended claim 1 to recite:

A field effect transistor comprising:  
a source;

a drain;  
a gate;  
a dielectric layer that coats the gate; and  
at least one carbon nanotube disposed at least partially in said dielectric layer, said at least one carbon nanotube having a portion which is functionalized with at least one indicator molecule that is exposed from the dielectric layer, **the at least one carbon nanotube being on the gate for transmitting charge from the at least one indicator molecule to the gate.**

*See supra*, emphasis added. Similar amendments were made to independent claims 9, 24, and 30. Support for these amendments can be found at least in paragraph [0016] and Figure 1 of the instant application and pages 1-2 of the provisional application serial no. 60/427,616.

*Gabriel* merely measures the conductance of a carbon nanotube between two electrodes 32a and 32b using an ammeter 44. *See Gabriel* ¶ [0045]. *Gabriel* does not disclose a field effect transistor at all, much less a field effect transistor comprising at least one ***carbon nanotube on the gate for transmitting charge from a least one indicator molecule to the gate***, as recited in the instant claims. Carbon nanotube(s), as recited in the pending claims, can be effective for example to electrically couple the source and drain upon interaction of a target molecule with an indicator molecule (e.g., in the manner of a field effect transistor).

In light of the foregoing, Applicants submit that the pending claims are allowable over *Gabriel*. Moreover, none of the other references cited by the Examiner remedy the deficiencies of *Gabriel* explained above. Applicants respectfully request withdrawal of the rejections and allowance of the pending claims.

### ***Replacement Figure 1***

Applicants provide a replacement Figure 1 which has been amended to clarify the location of the gate (reference numeral 25). No new matter is introduced by way of this amendment.

## CONCLUSION

Consideration of the foregoing amendments and remarks, reconsideration of the application, and withdrawal of the rejections is respectfully requested by Applicants. No new matter is introduced by way of the amendment. It is believed that each ground of rejection raised in the Office Action dated April 24, 2009 has been fully addressed. If any fee is due as a result of the filing of this paper, please appropriately charge such fee to Deposit Account Number 50-1515 of Conley Rose, P.C., Texas. If a petition for extension of time is necessary in order for this paper to be deemed timely filed, please consider this a petition therefore.

If a telephone conference would facilitate the resolution of any issue or expedite the prosecution of the application, the Examiner is invited to telephone the undersigned at the telephone number given below.

Respectfully submitted,  
CONLEY ROSE, P.C.

Date: \_\_\_\_\_

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